



U.S. Department of Energy  
**Energy Efficiency  
and Renewable Energy**

Bringing you a prosperous future where energy  
is clean, abundant, reliable, and affordable

**Federal Energy Management Program**

# The Energy Independence and Security Act of 2007

EISA and Sustainable Buildings  
ISWG – February 19, 2008



# Overview

- **Title IV—Energy savings in buildings and industry**
  - Sec. 421: DOE → Office of Commercial High Performance Green Buildings
  - Sec 431, 433: Energy reduction and efficiency goals for federal buildings
  - Sec 432: Evaluations
  - Sec 434: Federal building efficiency
  - Green certification system
  - Data centers
  - Sec 435: Leasing
  - Sec 436: GSA → Office of Federal High-Performance Green Buildings, High-Performance Green Building Consortium
  - Sec 491: Demonstration Projects
  - Sec 494: Green Building Advisory Committee
  - Sec 465: Advisory Committee on Energy Efficiency Finance
- **TITLE V—Energy savings in government and public institutions**
  - Subtitle B: Energy Savings Performance Contracting (prohibits agency policy limiting contract length to <25 years)
  - Subtitle C: Energy Efficiency in Federal Agencies



# Commercial Green Buildings

- **Office of Commercial High Performance Green Buildings** must be established by DOE
- **Appropriations:**
  - \$20,000,000 for fiscal year 2008; \$50,000,000 for 2009 and 2010, and so on
- **Components:**
  - conduct research
  - conduct pilot programs and demonstration projects
  - conduct deployment, dissemination, and technical assistance activities
  - develop training materials and courses for building professionals and trades
  - develop and disseminate public education materials
  - support code-setting organizations and State and local governments in developing minimum performance standards in building codes
  - develop strategies for overcoming the split incentives between builders and purchasers, and landlords and tenants
  - develop improved means of measurement and verification of energy savings and performance for public dissemination



# High-Performance Federal Buildings

**Subtitle C**

**Percentage Reduction**

**Fiscal Year**

2006 .....	2
2007 .....	4
2008 .....	9
2009 .....	12
2010 .....	15
2011 .....	18
2012 .....	21
2013 .....	24
2014 .....	27
2015 .....	30



# Management of Energy and Water Efficiency in Federal Buildings

- (B) **COVERED FACILITIES.**— *covered facilities consist of at least 75% of each agency's facility energy use using criteria developed by DOE*
- “(A) **EVALUATIONS.**—Effective beginning on the date that is 180 days after the date of enactment of this subsection and annually thereafter, energy managers shall complete, for each calendar year, a comprehensive energy and water evaluation for approximately 25 percent of the facilities of each agency that meet the criteria under paragraph (2)(B) in a manner that ensures that an evaluation of each such facility is completed at least once every 4 years.”
- Any energy or water-saving measure identified may be implemented not later than 2 years after the evaluation
- This will be included in OMB's scorecards
- DOE will establish a web-tracking system for each agency to use in reporting



# Federal Building Energy Efficiency Performance Standards

In new Federal buildings and Federal buildings undergoing major renovations  
reduce energy consumption from a 2003 baseline of a comparable building  
by:

## Percentage Reduction

### Fiscal Year

2010 .....	55
2015 .....	65
2020 .....	80
2025 .....	90
2030 .....	100

**Exceptions** (must be approved): if technically impracticable in light of the  
agency's specified functional needs for that building

In 90 Days DOE must identify a certification system and level for green  
buildings



# Management of Federal Building Efficiency

- When replacing equipment, renovating, etc., use the most energy efficient designs that are life-cycle cost effective
- Within 180 each Federal agency shall:
  - “(A) develop a process for reviewing each decision made on a large capital energy investment described in paragraph (1) to ensure that the requirements of this subsection are met; and
  - “(B) report to the Director of the Office of Management and Budget on the process established
- OMB will report within one year on agencies success in meeting above requirement
- Metering requirement expanded to natural gas and steam



# Leasing

- Starting December 2010, agencies cannot lease building space that has not earned the Energy Star label within the most recent year
- Exceptions:
  - No space is available that meets the functional/locational requirements
  - The agency remains in the same building
  - The agency leases a historical/cultural space
  - The space leased <10,000 gross sq. ft.
  - Lease contract requires all energy efficiency and conservation improvements that would be cost effective over the life of the lease





# Federal Green Buildings

- Within 60 days GSA → **Office of Federal High-Performance Green Buildings**
- establish a senior-level Federal Green Building Advisory Committee under section 474, which shall provide advice and recommendations in accordance with that section and subsection
- Within 90 days after the date of enactment of this Act, the Federal Director shall identify incentives, including awards, allowing agencies to retain savings in budget for reinvestment
- Report: within two years report status of meeting this subtitle



# High-Performance Green Building Partnership

- **High-Performance Green Building Partnership Consortium** must be created to represent the private sector in a public-private partnership to promote high-performance green buildings and zero-net-energy commercial buildings.
- “cost-efficient” means cost savings pay for the additional costs in 5 years or less (geothermal heat pumps have a separate standard: “as soon as practical”)
- **EXEMPTION**—The Administrator may exempt from the definition of “GSA facility” under this paragraph a building, structure, or facility that meets the requirements of section 543(c) of Public Law 95–619 (42 U.S.C. 8253(c)).



# Federal Green Building Performance: Reporting

- By October 31 2009 and 2010 (future dates TBD by Comptroller General)
  - Audit of implementation
  - Report results to congress and others
- Work with OMB to improve environmental stewardship scorecard and **include green building performance in OMB's scorecard**



## **Data Centers**

- Voluntary National Information Program to be established within 90 days by EPA and others



# Demonstration Project

- 1 demonstration project per year of green features in a Federal building from 2009 to 2014, project must:
  - Provide measureable elements to aid research
  - Achieve the highest rating offered by the high performance green building system
- 4+ demonstration projects at 4 universities



# Green Building Advisory Committee

- Within 180 days
- Representatives from:
  - section 421(e)
  - State and local governmental green building programs
  - Independent green building associations/councils
  - Building experts
  - National security experts
  - Public transportation industry experts
  - Environmental health experts
  - (max of 15 non-federal members)



## **Advisory Committee on Energy Efficiency Finance**

- DOE will establish this committee composed of members with expertise in:
  - (1) availability of seed capital;
  - (2) availability of venture capital;
  - (3) availability of other sources of private equity;
  - (4) investment banking with respect to corporate finance;
  - (5) investment banking with respect to mergers and acquisitions;
  - (6) equity capital markets;
  - (7) debt capital markets;
  - (8) research analysis;
  - (9) sales and trading;
  - (10) commercial lending; and
  - (11) residential lending.



## **TITLE V—ENERGY SAVINGS IN GOVERNMENT AND PUBLIC INSTITUTIONS**

- Subtitle B—Energy Savings Performance Contracting
  - Prohibits agency policy limiting contract length to <25 years





## Subtitle C—Energy Efficiency in Federal Agencies

- **SEC. 521.** INSTALLATION OF PHOTOVOLTAIC SYSTEM AT DEPARTMENT OF ENERGY HEADQUARTERS BUILDING.
- **SEC. 523.** STANDARD RELATING TO SOLAR HOT WATER HEATERS.
  - At least 30% of hot water demand for new construction or major renovations
  - Adds “if lifecycle cost-effective”
- **SEC. 524.** FEDERALLY-PROCURED APPLIANCES WITH STANDBY POWER.
- **SEC. 525.** FEDERAL PROCUREMENT OF ENERGY EFFICIENT PRODUCTS.
- **SEC. 527.** GOVERNMENT EFFICIENCY STATUS REPORTS.
  - annual report by each agency subject to any part of this title



# Web Access

- Access text of EISA 2007 at:  
[http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110\\_cong\\_bills&docid=f:h6enr.txt.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_bills&docid=f:h6enr.txt.pdf)



# Not Covered Today

- Title III:
  - Sec. 323 Public Building Energy Efficiency and Renewable Energy Systems
- Title IV:
  - Sec 438: Storm water runoff requirements for federal development projects
  - Sec 439: Cost-effective technology acceleration program



# Not Covered Today cont.

- **Title IV:**
- SEC. 438. STORM WATER RUNOFF REQUIREMENTS FOR FEDERAL DEVELOPMENT PROJECTS.
- SEC. 439. COST-EFFECTIVE TECHNOLOGY ACCELERATION PROGRAM.
- There is authorized to be appropriated to carry out sections 434 through 439 and 482 \$4,000,000 for each of fiscal years 2008 through 2012, to remain available until expended.



## **Not Covered Today cont.**

- **SEC. 451. INDUSTRIAL ENERGY EFFICIENCY inserts PART E—INDUSTRIAL ENERGY EFFICIENCY**
- **“SEC. 373. WASTE ENERGY RECOVERY INCENTIVE GRANT PROGRAM for:**
  - **waste energy recovery**
  - **excess electricity generation**
    - **Grant made at rate of \$10/MWh electricity from recoverable waste energy in first 3 years of project**
    - **Utilities eligible for 50% of grant**
    - **Useful thermal energy created will earn a grant of \$10 for each 3,412,000 Btus of excess used**
    - **BUT cannot get grants if the project qualifies for certain Fed tax incentives**
    - **\$100,000,000 for fiscal year 2008 and \$200,000,000**
    - **for each of fiscal years 2009 through 2012**